



## Model Number

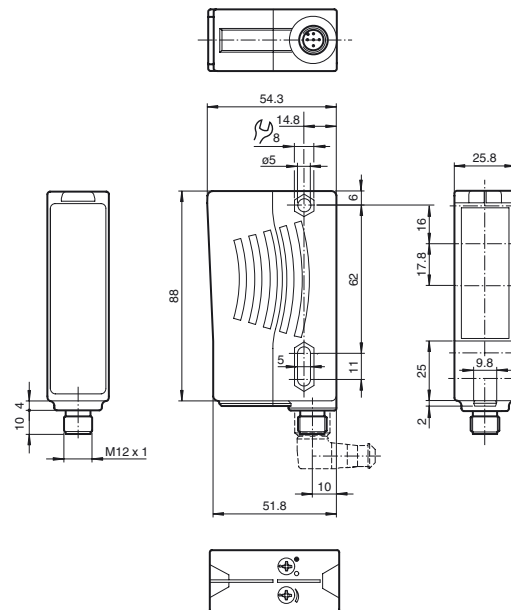
**RL28-55/47/73c**

Retroreflective sensor  
with 4-pin, M12 x 1 plastic connector

## Features

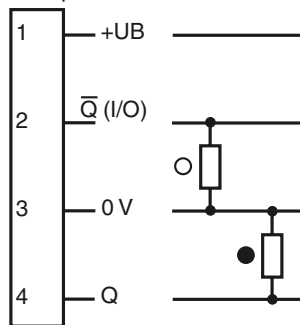
- Ultra bright LEDs for power on, weak signal indication and switching state
- Not sensitive to ambient light, even with switched energy saving lamps
- Waterproof, degree of protection IP67
- Protection class II

## Dimensions



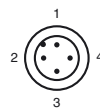
## Electrical connection

Option: /47



○ = Light on  
● = Dark on

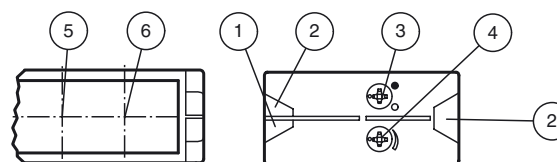
## Pinout



Wire colors in accordance with EN 60947-5-2

|   |    |         |
|---|----|---------|
| 1 | BN | (brown) |
| 2 | WH | (white) |
| 3 | BU | (blue)  |
| 4 | BK | (black) |

### Indicators/operating means



|   |                         |
|---|-------------------------|
| 1 | Operating display green |
| 2 | Switch state yellow     |
| 3 | Bright/dark switch      |
| 4 | Sensitivity adjustment  |
| 5 | Receiver                |
| 6 | Emitter                 |

**Technical data****General specifications**

|                            |                                      |
|----------------------------|--------------------------------------|
| Effective detection range  | 0 ... 17 m                           |
| Reflector distance         | 0.05 ... 17 m                        |
| Threshold detection range  | 21 m                                 |
| Reference target           | H85-2 reflector                      |
| Light source               | LED                                  |
| Light type                 | modulated visible red light , 660 nm |
| Polarization filter        | yes                                  |
| Diameter of the light spot | approx. 290 mm at a distance of 17 m |
| Angle of divergence        | emitter 1.2°<br>receiver 2°          |
| Ambient light limit        | 80000 Lux                            |

**Functional safety related parameters**

|                                |       |
|--------------------------------|-------|
| MTTF <sub>d</sub>              | 950 a |
| Mission Time (T <sub>M</sub> ) | 20 a  |
| Diagnostic Coverage (DC)       | 0 %   |

**Indicators/operating means**

|                     |                                                                                                                                        |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Operation indicator | LED green                                                                                                                              |
| Function indicator  | 2 LEDs yellow, light up when light beam is free, flash when falling short of the stability control, off when light beam is interrupted |
| Control elements    | sensitivity adjustment (Adjustment to < 25% of the effective operating range) , Light-on/dark-on changeover switch                     |

**Electrical specifications**

|                        |                |                |
|------------------------|----------------|----------------|
| Operating voltage      | U <sub>B</sub> | 10 ... 30 V DC |
| Ripple                 |                | 10 %           |
| No-load supply current | I <sub>0</sub> | ≤ 40 mA        |

**Output**

|                     |                                                                                             |         |
|---------------------|---------------------------------------------------------------------------------------------|---------|
| Switching type      | light/dark on switchable                                                                    |         |
| Signal output       | 2 PNP, complementary, short-circuit protected, reverse polarity protected , open collectors |         |
| Switching voltage   | max. 30 V DC                                                                                |         |
| Switching current   | max. 200 mA                                                                                 |         |
| Switching frequency | f                                                                                           | 1000 Hz |
| Response time       | 0.5 ms                                                                                      |         |

**Conformity**

|                  |              |
|------------------|--------------|
| Product standard | EN 60947-5-2 |
|------------------|--------------|

**Ambient conditions**

|                     |                                |
|---------------------|--------------------------------|
| Ambient temperature | -40 ... 60 °C (-40 ... 140 °F) |
| Storage temperature | -40 ... 75 °C (-40 ... 167 °F) |

**Mechanical specifications**

|                      |                          |
|----------------------|--------------------------|
| Housing width        | 25.8 mm                  |
| Housing height       | 88 mm                    |
| Housing depth        | 54.3 mm                  |
| Degree of protection | IP67                     |
| Connection           | 4-pin, M12 x 1 connector |
| Material             |                          |
| Housing              | Plastic ABS              |
| Optical face         | plastic                  |
| Connector            | plastic                  |
| Mass                 | 70 g                     |

**Approvals and certificates**

|                  |                                                                                 |
|------------------|---------------------------------------------------------------------------------|
| Protection class | II, rated voltage ≤ 250 V AC with pollution degree 1-2 according to IEC 60664-1 |
| UL approval      | E87056 , cULus Listed , class 2 power supply , type rating 1                    |

**Accessories****OMH-05**

Mounting aid for round steel ø 12 mm or sheet 1.5 mm ... 3 mm

**OMH-07**

Mounting aid for round steel ø 12 mm or sheet 1.5 mm ... 3 mm

**OMH-21**

Mounting bracket

**OMH-22**

Mounting bracket

**OMH-MLV11-K**

dove tail mounting clamp

**OMH-RLK29-HW**

Mounting bracket for rear wall mounting

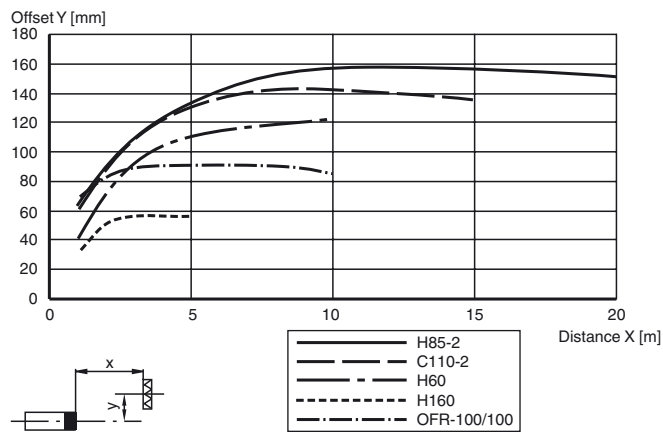
**OMH-RL28-C**

Weld slag cover model

Other suitable accessories can be found at [www.pepperl-fuchs.com](http://www.pepperl-fuchs.com)

## Curves/Diagrams

## Characteristic response curve



## Relative received light strength

